

# CONTRIBUTIONS TO THE FLORA OF THE GALAPAGOS ISLANDS, ECUADOR.

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## ABSTRACT

*Passiflora foetida* L. var. *galapagensis* Killip is sunk into *P. foetida* L. and *Passiflora tridactylites* Hook. f. is separated from *P. suberosa* L. New records of *Passiflora edulis*, *P. ligularis* and *P. quadrangularis* are reported. A key is provided to *Passiflora* in The Galápagos Islands. *Buddleja americana* L. and *Galium reynoldsii* Dempster are reported.

## PASSIFLORACEAE

*Passiflora edulis* Sims., Bot. Mag. 45: pl. 1989. 1818.

This species is widespread in most tropical and subtropical areas. In The Galápagos Islands found at the inhabited islands (Black, 1973 and pers. obs.).

Collections studied: Santa Cruz, Los Gemelos, Lawesson 1996 (CDS); Close to Charles Darwin Research Station, Lawesson 2158 (CDS).

*Passiflora foetida* L., Sp. Pl. 959 (1753).

*Passiflora foetida* L. var. *galapagensis* Killip, Field Mus. Nat. Hist. Bot. Ser. 19: 505. 1938.

This widespread and polymorphic species has been divided into many subspecific taxa by Killip (1938), however most students of Passifloraceae today agree that the real number of varieties is lower. A number of varieties exist in Central America, probably connected with different pollination syndromes. However, the South American taxa are probably only represented by few polymorphic taxa (Holm-Nielsen et al. 1988). The pubescence, as used by Killip, is not found to be a consistent character. It therefore seems justified to include the variety described from The Galápagos Islands in *P. foetida* L.

Collections studied: Champion Island, Adersen 1463 (C); Wiggins & Porter 494 (US) . Charles Island, Aggassiz s.n. (US); Lee s.n. (US); Schmitt 110 (US). Isabela Island, Sierra Negra, Cerro Paloma, East of El Quemado, M. & O. Hamann 2468 (C). San Cristobal Island, Adersen 710 (C); Snodgrass & Heller 496 (US); Wreck Bay, Stewart 2072 (US). Santa Cruz Island, Academy Bay, Fosberg 44720 (US); Fournier 141 (US); M. & O. Hamann 1596 (C); Howell 9045 (US); Stewart 2073 (US); Taylor 18 (US); Charles Darwin Research Station, Adersen 330 (C); Bentley 220 (US); van der Werff 2043 (AAU).

*Passiflora ligularis* Juss., Ann. Mus. Hist. Nat. 6: 113. pl. 40. 1805.

This species is introduced from continental Ecuador and is easily recognized by

the long petiolar glands.

Collections studied: Santa Cruz, North slope of Mount Crocker, *Scalesia* forest, M. & O. Hamann 2582 (C); Lawesson 2075 (AAU, CDS).

*Passiflora quadrangularis* L., Syst. ed. 10. 1248. 1759.

A widely cultivated passionflower which has been introduced to The Galápagos Islands. Found on the populated islands (Black, 1973 and pers. obs).

Collections studied: San Cristobal, near El Junco, Adersen 1679 (C). Santa Cruz, Rancho Apolo XI, close to bellavista, M. & O. Hamann 2204 (C).

*Passiflora suberosa* L., Sp. Pl. 958, 1759.

Killip (1938) lumped *P. tridactylites* Hook. f. with this common American species. Although two variable species, both merit specific status, based on differences in morphology and ecological affinity, as pointed out in the key below and under *P. tridactylites*. *P. suberosa* is widespread but restricted to rather mesic habitats, whereas *P. tridactylites* occurs in dry lowland areas.

Collections studied: Isabela, Santo Tomas, 350 m, Adersen 2374 (C). Fernandina, SE slope, 2-2.5 km below rim, 780 m, M. & O. Hamann 233 (C). Pinta, Central Crater, 520 m, Adersen 1212 (C); NW. of Cabo Ibbotson, 350 m, M. & O. Hamann 834 (C); S. slope 240-400 m, Lawesson 2587, 2620 (AAU, CDS); moist region, Stewart 2079 (F). Santa Cruz, half km N of C. Colorado, 600 m, Adersen 197 (C); N. slope of C. Crocker, 590 m, M. & O. Hamann 646 (C); 630 m, M. & O. Hamann 630 (C); 650 m, M. & O. Hamann 624 (C). Santiago, "El Campamento Central", Central Highlands, 570 m, M. & O. Hamann 2017 (C).

*Passiflora tridactylites* Hook. f., Trans. Linn. Soc. 20: 222. 1851.

This species is easily distinguishable from *P. suberosa* by the narrow, long blade-lobes, and the very long androgynophore.

Collections studied: Espanola, Landing site area and trail to El Choco, 0-200 m, Lawesson 3126 (AAU; CDS). Fernandina, 300 m, Fosberg 45002, 45064 (F). Gardner (Espanola), Stewart 2045 (F). Isabela, Volcano Darwin, SW-slope, below rim of crater, 1150 m, M. & O. Hamann 1663 (C). San Cristobal, above P. Baquerizo, Wiggins & Porter 403 (F). Santa Cruz, 1.5 km N. of Cerro Colorado II, 450 m, Adersen 211 (C). Santiago, Central Highlands, on rock-wall, 880 m, Adersen 1102 (C); Howell 9665 (F); James Bay, 7 m, Werff 1095 (AAU).

*Passiflora colinvauxii* Wiggins, Madroño 20: 251. 1970.

This endemic is restricted to Santa Cruz Island.

Collections studied: Santa Cruz, Puntudo, 750 m, Adersen 134 (C); Caseta, 150 m, Adersen 372 (C); near El Chato, 180 m, M. & O. Hamann 1050 (C).

KEY TO THE *PASSIFLORA* OF GALAPAGOS

- |   |                          |
|---|--------------------------|
| 1. Stem quadrangular, winged                                  | <i>P. quadrangularis</i> |
| 1. Stem terete, not winged                                    | 2.                       |
| 2. Petiolar glands ligulate to filiform, 3-8 mm               | <i>P. ligularis</i>      |
| 2. Petiolar glands short stipitate to sessile, less than 3 mm | 3.                       |
| 3. Sepals with one pair of marginal glands                    | <i>P. edulis</i>         |
| 3. Sepals without glands                                      | 4.                       |
| 4. Blades broader than long, 2-lobed                          | <i>P. colinvauxii</i>    |
| 4. Blades longer than wide, 3-lobed                           | 5.                       |
| 5. Lobes narrowly oblong, androgynophore 8-10 mm              | <i>P. tridactylites</i>  |
| 5. Lobes broadly ovate, androgynophore 4-7 mm                 | <i>P. suberosa</i>       |

## BUDDLEJACEAE

*Buddleja americana* L., Sp. Pl. 112. 1753.

A new family record to The Galápagos Islands (Lawesson & Norman, 1987). In Galápagos only known from the highlands of Floreana.

Collection studied: Floreana, Cerro Naranjo in central highlands, Lawesson & Zederkof 2849 (CDS).

## RUBIACEAE

*Galium reynoldsii* Dempster, Allertonia 2 (4): 255-256, 1980.

This is a new record for The Galápagos Islands, hitherto known only from the type collection: Andes, Southern Chile (Dempster, 1980). How this species came from Southern America to Galápagos may never be revealed but migrant birds from the Southern Pacific pass every year and may have carried the propagules.

Collections studied: Floreana, highlands close to Cerro Naranjo, closed, moist *Psidium guajava* forest, Lawesson & Zederkof 2790, 2869 (CDS, AAU).

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